The Leicester Department of Physics and Astronomy offers superb courses. Students get a broader exposure to different areas of physics and astronomy than is possible in some other universities.

Prof. Tom Harquist, External Examiner, University of Leeds

We believe that our world-changing research produces high-quality teaching – and will inspire you to go further.

At Leicester we consider education and knowledge to be a power for good. We aim to push the boundaries and discover ways to improve and change the world for the better.

But this is not just about what we do – this is about you. We’re equally as passionate about giving you the chance to find your own way, push the boundaries and put your mark on the world.

We know our work is better in a shared academic community that includes you. Where you’re coming from and your journey up to this point will have given you your own personal perspectives and ideas. These, along with your energy and willingness to ask the difficult questions benefits you and us.

We believe that teaching can be inspirational, when delivered by passionate scholars engaged in pioneering research. You’ll be working with our leading academics who are at the cutting edge of their disciplines. By sharing their enthusiasm you’ll become part of a stimulating and innovative learning community, which will enable you to realise your potential and to compete alongside the very best.

We’ve found an area on Mars that could have supported life.

Where will your curiosity take you?
Welcome to the Department of Physics and Astronomy

The Department of Physics and Astronomy at the University of Leicester is a world-class centre for teaching and research.

We are a friendly department of 46 research-active academic staff, admitting around 120 undergraduate students each year. This means the best staff-student ratio in the UK, a wide range of module choice, and the opportunity to be taught by academics who are passionately engaged in advancing their fields.

We pride ourselves on our commitment to teaching and our comprehensive student support. Studying physics at Leicester will enhance your academic knowledge and problem solving ability, develop your confidence and communication skills, and provide excellent career opportunities.

Choosing your degree is one of the most important decisions you will make. We hope that you are considering studying with us, and that the information in this brochure will help you to make your choice. We would certainly encourage you to visit us at an Open Day and to contact our admissions team (physics@le.ac.uk) if you have any questions.

Professor Mark Lester, Head of Department

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Open Days

Details of the University open days can be found at www.le.ac.uk/opendays

Contact Details

The Admissions Team, Department of Physics and Astronomy
t: 0116 252 3575
e: physics@le.ac.uk
w: www.le.ac.uk/physics
Why choose Physics at the University of Leicester?

A department with a world class reputation

The wide-ranging research excellence in the Department is reflected in the breadth of content and quality of teaching in all of our degrees. Our course covers the Universe from the quantum scale to the cosmological so, no matter where your interests lie, you will be taught by international experts.

A flexible degree

You can choose to follow a broad physics course covering many topics or to specialise in astrophysics, nanotechnology, planetary science, or space science and technology. You can easily mix and match option courses and even projects from different specialities to suit your individual interests and career aspirations as they develop throughout your time at University.

A friendly, vibrant atmosphere

We have an excellent staff-student ratio (the best in the UK) and an open door policy, so lecturers are always available and you can get the support you need. We also have dedicated space for physics students in our building, including a common room, computer suites and quiet work areas, which all add to the sense of community in the department.

An outstanding track record in graduate employment

We have strong links with world leading companies in industry, business and scientific research, and you will have the opportunity to enhance your CV by working on an optional ten week research project with one of our industrial partners. You can also add to your experience and achievements by mentoring students in local schools, spending time abroad at one of our partner universities, or working on one of our student led projects outside of the curriculum.

Around one third of our students go on to study for a PhD and, from there, into a research career. As an undergraduate, you will experience a real taste of cutting-edge research as part of our third and fourth year student projects.
Centre of excellence

The Department is one of only three UK Physics departments to have been awarded the prestigious status of a Centre of Excellence in Teaching and Learning (CETL).

Accreditation

All of our degrees (Physics, Physics with Astrophysics, Physics with Nanotechnology, Physics with Planetary Science, and Physics with Space Science and Technology) are accredited by the U.K. Institute of Physics and all are based on the world leading research in the department. All of our degrees share a common core of essential physics and mathematics.

“I recommend the course at Leicester to anyone who is interested in studying Physics. It is a challenging course but you leave with a broad knowledge of physics and a wide range of skills, which leaves you open to many different career options. The course is flexible enough so you can choose the topics that you are most interested in.”

Emma, MPhys, Year 4 Student
Physics and Astronomy Degree Courses

We offer five interlinked honours programmes in Physics and Astronomy, at both MPhys and BSc levels.

Which Physics Degree is the right choice for me?

Physics BSc/MPhys

Physics is the most fundamental of the sciences. It is concerned with the study of matter and energy on all scales from the sub-atomic to the size of the visible Universe. As a physics student at Leicester you will acquire an appreciation of the scope and impact of modern physics and the use of mathematics, computing and experimentation to solve important real-world problems.

The Physics (BSc/MPhys) programme is built around a core of essential physics and mathematics, and offers the widest choice of option modules.

Physics with Astrophysics BSc/MPhys

Astrophysics is about understanding the Universe at large, from the lives and deaths of stars to the formation of galaxies, from compact black holes and neutron stars to the largest clusters of galaxies. You will have the opportunity to study a range of specialist astrophysics options covering all major areas of current astrophysics research, supported by the diverse activities of the Department’s two astrophysics research groups (theoretical and observational). We run the oldest established Physics with Astrophysics degree in the UK.

The Physics with Astrophysics programme is built around a core of essential physics and mathematics, and reflects a preference for astrophysics option courses (eg. Active Galaxies, or Cosmological Structures) and research projects.

Physics with Nanotechnology BSc/MPhys

Nanotechnology is about the physics of the very-small – designing, fabricating and understanding the structures at the nanoscale that are contributing to transformative new technologies in computing, medicine, energy production and the environment. Research in the Department includes the study of magnetic nanostructures, artificial atoms and nanoparticles. The specialist options and projects that you will study are based around this research, particularly in areas such as medical nanotechnology and renewable energy.

The Physics with Nanotechnology programme is built around a core of essential physics and mathematics, and reflects a preference for nanotechnology option courses (eg. Nanostructures, or Advanced Materials) and research projects.
Physics with Planetary Science BSc/MPhys

Planetary Science involves studying the formation and evolution of our Solar System. This is a rapidly developing and wide ranging field. You will have the opportunity to study topics as diverse as climate and atmospheric physics, the aurora of gas giants, and comet and planet formation. The specialist option courses in planetary science are supported by the activities of three of the Department’s research groups. We lead the national centre for Earth observation.

The Physics with Planetary Science programme is built around a core of essential physics and mathematics, and reflects a preference for planetary science option courses (eg. Planetary Surfaces, or Solar Terrestrial Relations) and research projects.

Physics with Space Science and Technology BSc/MPhys

Space Science encompasses earth observation, space astronomy and the study of the Solar System. Space technology is the means by which this science can be done. The University of Leicester has the largest campus-based space research activity in Europe, and the space science and technology options that you will study are based on this research. This includes a strong involvement in space science like the Bepi-Columbo mission to Mercury, or the JUICE mission to Jupiter, and detector design and development for instruments like the James Webb Space Telescope and the ESA Mars rover.

The Physics with Space Science and Technology programme is built around a core of essential physics and mathematics, and reflects a preference for space science and technology option courses (eg. Rocket Propulsion Systems, or Human Spaceflight) and research projects.

MPhys or BSc?

The three-year BSc course is an excellent route to a very wide range of careers in industry and business. The four-year MPhys course is aimed at those who wish to train as research physicists.

Can I change between degree courses?

Transfer between BSc and MPhys degrees is possible up to the second year and staff in the department will offer help and advice at the end of the first year.

It is possible to transfer between different speciality degrees until the beginning of the third year.

At A Glance

- **Places**: 120
- **Academic Staff**: 46
- **Typical offers**: AAB/ IB 34 pts for all courses
Course Modules

Core and option course modules

Each degree course offered consists of core and option modules. The core modules are common to all of our degrees. These contain the essential physics and mathematics you need to ensure the widest possible employment opportunities once you graduate.

You will have the chance to shape your degree the way you want. The Department offers an extensive set of option modules that explore a diverse range of topics in pure and applied physics, and within each specialist degree area (Astrophysics, Nanotechnology, Planetary Science, Space Science and Technology). Our course is designed to be flexible so you can choose options and even research projects from any of these specialist areas.

Specialist option courses are available in all years so you can follow your individual interests. In the first and second years the emphasis is on core material, whilst in the third and fourth years the balance switches from core physics and maths to advanced specialist options and research projects. In each year you choose four option courses and, to qualify for a specialist degree you must take at least half of your option courses from within that specialism.

“The course has allowed me to study a range of different areas – from nanostructures to the birth of the Universe. I have been supported by enthusiastic and knowledgeable members of staff, in an amazing four years.”

John, MPhys, Year 4 Student
## Core
- Dynamics
- Electricity and Magnetism
- Light and Matter
- Waves and Quanta
- Mathematical Physics 1.1 & 1.2
- Laboratory Physics 1
- Group Research Project 1

## Options
**Choice of 4 option courses**
- Digital Electronic Systems
- Great Experiments
- Modern Physics
- Nanophysics
- Observational Astronomy
- Planetary Exploration
- Science from Space
- Space Technology
- Terrestrial Planets
- The Sun and Stars

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## First Year
- Relativity and Particles
- Waves and Fields
- Condensed Matter Physics
- Electromagnetic Fields
- Scientific Inference 1
- Mathematical Physics 2
- Laboratory Physics 2
- Group Research Project 2

## Second Year
- Quantum Mechanics
- Atoms and Nuclei
- Radiation and Matter 1
- Advanced Vector Calculus
- Fourier Transforms
- Physics Challenge
- Pair Research Project
- Physics/Industry Research Project
- Mathematical Physics 3 (MPhys)

## Third Year
- Plasma Physics
- Radiation and Matter 2
- Dynamical Systems
- Fluids
- Advanced Study Project
- Research Project
- Journal of Special Topics

## Fourth Year (MPhys)
- Applied Quantum Mechanisms
- Cosmological Structures
- General Relativity
- Ionospheric Physics
- Nanostructures
- Planetary Surfaces

## Third and Fourth Year Students
- Choose from the following options:
  - Active Galaxies
  - Applied Nuclear Power
  - Computational Physics
  - Digital Imaging
  - Elementary Particles
  - Extreme Stars
  - Human Spaceflight
  - Life in the Universe
  - Medical X-rays and NMR
  - Advanced Materials
  - Planetary Science
  - Radio Systems
  - Relativity
  - Advanced Propulsion Systems
  - Solar Terrestrial Relations
  - Stellar Structure and Evolution
  - The Earth from Space
  - Cosmology
  - Planetary Plasma Environments
  - Magnetic Systems
  - Physics of Society
  - Quantum Fields
  - Quantum Theory of Solids
  - Scientific Inference 2
  - Space Instrumentation
  - Space Plasmas

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For detailed information on any of these courses go to: [www.le.ac.uk/physics/admissions](http://www.le.ac.uk/physics/admissions)
Teaching, Learning and Assessment

We aim to create a challenging and exciting learning environment which will help you to get the most out of your degree. We have an excellent staff/student ratio and we are able to offer a large number of small-group activities in addition to traditional lectures. This means you will benefit from working directly with our leading academics. Together with our open door policy, this means that staff are always available and you can get the support you need.

Lectures

Each core course starts with lectures, and many different lecturing styles are used depending on the material that is covered. During the first and second year, core lectures are complemented with tutorials, problem solving workshops, seminars and laboratory classes.

Workshops

Workshop classes compliment the core physics and mathematics courses. They provide an opportunity to work through exercises in small groups with teaching staff on hand to help you through problems.

Seminars

Seminar classes are typically led by our research students. During these weekly small group classes (groups of around 10) the research student will take you through the solutions to preset homework problems.

Laboratory classes

Experimental work is an essential aspect of physics education and research, and laboratory training is an integral part of our degree programme. You will explore a range of experiments covering the main areas of physics in our dedicated, modern teaching laboratories, under the guidance of our expert research and teaching staff.

Tutorials

You will be assigned an academic tutor who will keep track of your progression throughout your degree. Tutorials are a very important part of our first and second year: each week you will meet with your tutor and the rest of you tutorial group (usually four students per group) to discuss areas of the course or study skills, cover more advanced topics, or look into exciting new developments in Physics research. Tutorials are optional for third and fourth year students but tutors are always on hand to offer advice on the course and future careers.

Project work

Project work starts in the very first term of the first year. Initially this is in the form of short research projects, in which groups of around four to eight students tackle open ended problems that involve some aspect of both experimentation and theory.

By the third and fourth years, project work has developed to the stage where you will experience a genuine taste of research at the cutting edge: either working two-to-one with a member of academic staff in the third year, or one-to-one in the fourth year.

In the third year you will also have the option of a project set by one of our colleagues in industry: working on a time-critical problem with industrial significance, reporting directly to the company involved.

Computing classes

Computing is a vital component of both experimental and theoretical physics, and also a highly transferable skill. Training in scientific computation and programming, using our dedicated computing facilities, is built into our degree programme.
Physics Challenge and Journal of Physics Special Topics

These innovative courses can be a great deal of fun, but also serve a serious educational purpose.

In the weekly, third year Physics Challenge, students work in teams to solve tricky, real world problems involving some imagination, estimation or approximation. Like many problems in industry, there are often no right answers but the teams compete to find and present the best answers.

In the fourth year, students write short research articles in the Department’s own Journal of Physics Special Topics. This provides a crucial insight into the world of scientific publishing and peer review, as well as experience in communicating the results of scientific research.

The journal has generated a great deal of media exposure for our students. It is also highly praised by the UK Institute of Physics who said that it was ‘an excellent advertisement for the physics department in addition to being a valuable piece of work that the students could show prospective employers.’

Highlights of the annual journal are available online at go.le.ac.uk/physics-pst

Feedback and assessment

Our course is designed to provide comprehensive and targeted feedback, especially as part of workshops, seminars, tutorials and projects.

You will be assessed by a variety of methods including formal examinations and course work (including workshop and seminar problem classes). Laboratory work is primarily assessed in real time and project work is assessed through written reports and oral presentations. In the core courses in the first year, the split is 30% continual assessment, 70% exam.
Resources and Facilities

As a Physics and Astronomy student you will have access to the outstanding facilities in the Department. These include our supercomputer, clean rooms, nano-microscopy centre, undergraduate observatories and state-of-the art undergraduate laboratories.

There are dedicated student computer suites and a common room, and this helps foster our friendly and vibrant atmosphere.

Computers and quiet study areas

The Department contains two computer suites (60 computers) that are dedicated for physics and astronomy students. These provide networked access to the University’s campus wide service, including access to our 500 core undergraduate supercomputer. There is wireless connectivity throughout the Department.

Two of our quiet study rooms (seating 95 students per room) also offer computer access (an additional 60 computers). One of our quiet study areas is reserved for first years.

Students use these facilities for group work, report writing, data analysis, production of presentations and scientific computing.

Lecture theatres

The main Physics building houses two 120-seater lecture theatres, two 35-seater lecture theatres and eight seminar rooms. Most of our teaching is done within the Department and students spend most of their time here, which creates a real community atmosphere.

Common room

The Department’s common room is open to all Physics and Astronomy students and staff. It's a good place to mix, work informally or have a cup of coffee and some lunch.

“...What I loved most was the fact that project work in the final year was actually useful science. This made solving related problems with my supervisor so much more engaging.”

John, MPhys, PhD student
Library

We continually invest in all our facilities to meet the needs of all our students. The award-winning £32 million David Wilson Library is a light, airy, five-storey building providing state-of-the art facilities for all our students.

We invest over £6 million per year in the Library. Self-service loan and return, group study rooms, hundreds of PCs, netbook loans, wireless access throughout, staffed Help Zones, 24/5 opening during term time, plus a bookshop and café create a first-class study environment.

Our Librarians can provide detailed advice on finding and using information, and help you make the most of the resources available in the Library and on the web. You can also use our online guides to finding information for your coursework.

There is access to over one million printed volumes and a digital library of 23,000 electronic journals and over 350,000 eBooks. Our electronic resources can be accessed from anywhere you have an Internet connection.

The Library: www.le.ac.uk/library

Supercomputing

The Department hosts three supercomputers: ALICE (3000+ processing cores) is the University’s High Performance Computing Cluster; DiRAC (4000+ cores) is part of the UK’s integrated supercomputing facility for research in particle physics, astrophysics and cosmology; and SPECTRE is a 500 core supercomputer reserved for undergraduate use.
Research in Physics and Astronomy

We have a track record of over 50 years of world leading research in the Department. Our research interests cover areas from colliding galaxies down to the smallest nanoparticle.

All of our 46 teaching staff (including 22 professors) are research active with reputations built on an international level. The teaching you receive and knowledge you acquire will be based on this pioneering research. The Department also employs over 100 research and technical staff and supports around 70 PhD students.

The main Physics building accommodates several research groups – Radio and Space Plasma Physics, X-ray and Observational Astronomy, Condensed Matter Physics and Theoretical Astrophysics – as well as centres for supercomputing, microscopy, Gamma and X-ray astronomy, radar sounding, and the Swift UK Data Centre.

Our purpose built Space Research Centre houses the Space Projects and Instrumentation group and provides laboratories, clean rooms, and facilities for Earth Observation Science and Bio-imaging. We run the largest campus based space research programme in Europe and have been involved with many major space missions: since 1967 there has been a continuous series of successful Leicester built instruments operating in space. We head the national research centre for Earth Observation.

You can find more about the research in the department on our website www.le.ac.uk/physics

Student research projects

We encourage our students to get involved and, in your third and fourth year, you will have a real opportunity to make a contribution at the cutting edge of physics research.

The wide ranging research interests in the Department are reflected in the enormous range of undergraduate projects that we offer.

Recent undergraduate projects include: searching for black holes, developing equipment to produce nanoparticles, investigating the Martian magnetosphere, looking at the quantum physics of graphene, and modelling galactic mergers.

You can find more information on the problems our undergraduates have been tackling through our website: go to www.le.ac.uk/physics/admissions and navigate to ‘Course lists and handbooks’.
“Leicester Physics Department has a wide range of research expertise and I really enjoyed the opportunities to work on cutting-edge research projects as an undergraduate.”

Sarah, MPhys, PhD

Postgraduate research opportunities

The Department offers PhD opportunities in the following areas: experimental and theoretical condensed matter physics, earth observation science, radio and space plasma physics, space projects and instrumentation, theoretical astrophysics, and X-ray and observational astronomy. More details about currently available PhD projects can be found from our website: www.le.ac.uk/physics

Technology transfer

The Department’s ground-breaking work in detector technology has led to three spin-out companies which operate out of the Space Research Centre at the University. Bioastral specialise in gamma-ray detectors for cancer care in the medical industry. Spectral ID produce award winning detectors which detect high end counterfeit goods, and CityScan detect and map atmospheric pollution.

Observatory

The University observatory has two computerised telescopes: a 20-inch PlaneWave with CCD camera, and a 12-inch Meade. Students use the telescopes for projects, for public outreach events and, (via a booking system) simply for looking at the sky! Our undergraduates also have remote access to a 17-inch PlaneWave telescope on Mallorca.

“The GrlP gave me a good insight into how a small/medium sized business works. There was lots of room for creative problem solving, and doing something no other student had done before made the project very exciting.”

Maria, MPhys, Year 3 Student
Employability and Careers

As a Physics and Astronomy student at the University of Leicester you will gain experience and confidence in problem solving, experimentation, analysis, computer programming and independent thinking. Group projects in the first, second and third years develop communication, presentation and team working skills, while research projects in the third and fourth years help to nurture the skills required of a successful scientific researcher.

In addition to the experience you will gain from the core-curriculum there are many optional activities which you can use to build your skills and enhance your CV.

Develop links to industry

As part of your third year you can choose to work directly with one of our industrial partners on a ten week project. During these optional Group Industrial Research Projects (GrIPs) you will obtain an understanding of the needs of business through applied research into a relevant industrial problem. You will gain invaluable project, budget and team management experience in a workplace environment working on a real project that has real impact for the industrial clients.

Recent projects have covered the spectrum from investigating nuclear magnetic resonance signals in oil field boreholes for the industrial giants Weatherford International, to building a new beehive monitoring system for the Leicestershire Bee Keepers association.

You can also use vacation employment at an approved industrial post to count towards your degree or opt to spend your third year on an industrial placement. The careers tutor in the department will offer advice and assist you in finding a post.

Summer Undergraduate Research Experience (SURE)

SURE is a prestigious six-week summer programme in which we support around ten undergraduate students to undertake research within the Department and the Space Research Centre. As well as participating in cutting-edge research you would benefit from a seminar series on current research topics in Physics and Astronomy.

“...I loved my time on the SURE internship, the department was very friendly and gave me a great insight into the work of a researcher. My work included research into thermoelectric devices and their predicted performance. It gave me the opportunity to develop as a physicist and contribute to a real project.”

Amy, MPhys, Year 3 Student
**Graduate careers**

The skills and knowledge gained by our graduates makes them highly prized by a wide range of employers. The vast majority secure good jobs or start postgraduate training within one year of graduation. They can be found as scientists in a wide variety of fields from the space industry, to medical physics, to renewable energy research. Or in areas such as finance, the media, the civil service, IT, teaching or management. Around one third go on to study for a PhD or similar advanced qualification.

**Course Opportunities**

**Undergraduate Ambassadors in Schools**

During year three you can opt to gain firsthand experience of physics education through a mentoring scheme with physics teachers in local schools. If you take part in the Ambassador Scheme you will work with a class for half a day a week over one semester. You will have the opportunity to act as a positive role-model for young people interested in physics, as well as gaining experience in communicating the subject, and in organisational and interpersonal skills.

**Study Abroad**

Broaden your horizons with a year abroad. You can choose to spend your third year studying physics at one of our partner universities in France (Université de Nice-Sophia Antipolis) and Germany (Universität Siegen). We offer semester-long exchange schemes with universities in the USA (Arizona State), Canada (McMaster University), Australia (LaTrobe University, Melbourne) and Turkey (Fatih University, Istanbul). We are also happy to assist with exchange visits to additional Universities.

“I was interested in going into teaching and so chose the Ambassador Scheme for Education, which meant working in a local school; an experience I really enjoyed and a great way to enhance my degree!”

_Jenny, BSc, Year 3 Student_
Career Development Service

The Career Development Service can help you gain the extra dimension you need to stand out – real-world skills and qualities that will not only enhance your early career prospects, but will stay with you for life. The way to make the most of you is to work with them the moment you arrive at Leicester.

The Career Development Service looks at the bigger picture and encourages you to be reflective and think about what you want out of a career. You can then explore your options and begin looking at what you need to do to fulfil those big ambitions.

Your academic talent is a key ingredient to success, but having relevant experience is another vital element in securing that dream role after you graduate. The Career Development Service provides a multitude of opportunities to ensure you’re able to acquire the experience needed to get that all important foot on the ladder. So whether you want to make a difference in the voluntary sector, reach the top in high-flying business or be the next big thing in media, there are specially designed programmes and activities that can support you in getting the skills, experiences and exposure you need.

The Career Development Service has its own network of graduate employers who tell them what they want in an employee in terms of skills and knowledge. Graduate employers visit campus all year round, offering workshops and talks on different career pathways. You have the chance to network, get the inside knowledge on industries and find out exactly what employers are looking for.

www.le.ac.uk/careers
Sam Fairhurst, BSc
EDF Energy, Nuclear Energy Graduate Programme
I am currently employed by EDF Energy as a Nuclear Graduate. The role has been exciting and varied. I have travelled around the UK on different attachments, each lasting around 6 weeks. I have visited various nuclear stations and supporting sites, and gained firsthand experience of the different departments required to maintain the safe and reliable operation of a nuclear power station. I have worked on high profile projects which affect the lifetime, productivity and safety of the station.

The flexibility and diversity of the modules available at Leicester is amazing. As a Physics student I had the opportunity to take modules ranging from Nanotechnology to Management, Space Mission Design to Plasma Physics. The up to date expertise of all the staff, their support and their encouragement is what makes Leicester University such a good place to study Physics.

Chris Johnson, MPhys
Trainee Chartered Accountant, Buzzacott LLP
The courses are structured to push you and help you realise your true potential. Staff are approachable and are research experts in their fields, meaning that you can take the learning as far and as wide as you want to.

Ed Bean, MPhys
EADS Astrium, graduate programme
I am currently working on the ExoMar rover. My role is to integrate the system that gets the picture from the cameras and sends it to the navigation software which generates 3D maps of the terrain. The software then detects dangerous rocks and high gradient slopes and generates a path to avoid them.

I’ve also spent some time on system engineering for the mid infrared instrument on the James Webb Space Telescope. There are 27 different institutes across Europe and the USA involved in this project, and Astrium is helping to manage everyone’s efforts to build the instrument. It was a great experience working with people from different cultures.

Leicester was a great environment to encourage me to reach my potential and to provide me with all the tools I’ve needed to be successful in my career both in terms of Physics and my ability to teamwork and communicate.

Sarah Cruddas, BSc
BBC Science Reporter and Weather Presenter
The course armed me with much more than just a degree. It gave me an understanding of the importance of communicating science and the confidence to push myself in a highly competitive industry. My degree is well respected and without going to Leicester University I would not have achieved the success I have today.
A lot of time is spent in the lab, which exercises the practical and social side of physics. It’s a great way of getting to know people on my course. You learn report writing and analytical skills – it teaches you to be a scientist.

Melissa, MPhys

View Melissa’s full profile at www.le.ac.uk/profiles/physics

Student Life

Campus

On our bustling compact campus it’s impossible to walk from one end to the other without bumping into someone you know along the way. The campus is a vibrant community, with all manner of places to meet, eat and drink, as well as study. We’re committed to providing you with high quality facilities and our £1bn campus development plan ensures all our resources meet the needs of modern and ambitious students.

Students’ Union

The Students’ Union is brimming with opportunities that will make your time at Leicester unforgettable. The spectacular Percy Gee building boasts superb facilities, from bookshops to bars and the fantastic live music venue, O2 Academy Leicester.
You are encouraged to get involved with the SU – there are over 200 student societies covering a huge range – sport, politics, media, performing arts and much, much more. It's a great way of meeting new people, gaining skills or trying something completely different!

Accommodation

Our accommodation offers you a wide variety of choice. Whether you fancy self-catered or catered, en-suite or standard, there will be a package to suit you. Our halls at Oadby are surrounded by beautiful Botanic Gardens and offer a thriving social life. Accommodation in the city gives you independence and the amenities of Leicester right on your doorstep. You are guaranteed a room in halls if you apply for accommodation by 1 September of your year of entry.

www.le.ac.uk/accommodation

Sports facilities

The University has recently invested £10m in its sports facilities. You can enjoy a work out, take a swim or work up a sweat in a fitness class at our sports centres on campus or at Manor Road (next to the Oadby Student Village). You are also encouraged to get involved with our sports clubs, which welcome members of all abilities. Keen competitors can also represent the University through Team Leicester, the hotly-contested Varsity matches and get involved with our thriving Intramural events.

www.le.ac.uk/sports

Embrace Arts

The University has its own arts centre, Embrace Arts, with a packed programme for students and the public, featuring music, dance, theatre, comedy as well as exhibitions. It also runs courses covering everything from salsa dancing to jewellery making. Students can get concessionary prices and discounts on courses and workshops.

www.embracearts.co.uk

City

Leicester is a lively and diverse city and the tenth largest in Britain. It has all the activities and facilities you would expect, with a friendly and safe atmosphere. The city centre is just a short walk from campus so you’ll never be far from the action.

Leicester’s diverse heritage is reflected in a dazzling array of festivals and cultural experiences including the largest Diwali celebrations outside India, the UK’s longest running Comedy Festival and the University’s hugely successful book festival – Literary Leicester.

Recent developments have led to the opening of the world class Curve Theatre and Phoenix Square Independent Arts Centre in the new Cultural Quarter, which complement Leicester’s existing array of cinemas, theatres, museums and galleries.

Leicester is a city of sporting excellence. Sports fans can enjoy Premier League football with Leicester City and watch top-class rugby at Welford Road, home of the mighty Leicester Tigers. The Leicester Riders are a formidable presence in the British Basketball League (BBL), and during the summer months, Leicestershire County cricket club compete in the county championship and T20 Blast competition.

The sparkling Highcross complex features 110,000 square metres of retail therapy, bars, cafés and restaurants. For those with independent tastes Leicester Lanes houses a variety of boutiques and specialist shops.

As you would expect from a true student city, there is a huge range of bars, clubs and live music venues that cater for all kinds of tastes. Food lovers are treated to a fantastic selection of restaurants, with specialities available from every corner of the world.
# Applying to the Department of Physics and Astronomy

All applications must be made through the UCAS system. The UCAS codes for each of our courses are given below.

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Code</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSc Physics</td>
<td>F300</td>
<td>3 years full-time</td>
</tr>
<tr>
<td>MPhys Physics</td>
<td>F303</td>
<td>4 years full-time</td>
</tr>
<tr>
<td>BSc Physics with Astrophysics</td>
<td>F3F5</td>
<td>3 years full-time</td>
</tr>
<tr>
<td>MPhys Physics with Astrophysics</td>
<td>F3FM</td>
<td>4 years full-time</td>
</tr>
<tr>
<td>BSc Physics with Nanotechnology</td>
<td>F391</td>
<td>3 years full-time</td>
</tr>
<tr>
<td>MPhys Physics with Nanotechnology</td>
<td>F390</td>
<td>4 years full-time</td>
</tr>
<tr>
<td>BSc Physics with Planetary Science</td>
<td>F3FN</td>
<td>3 years full-time</td>
</tr>
<tr>
<td>MPhys Physics with Planetary Science</td>
<td>F394</td>
<td>4 years full-time</td>
</tr>
<tr>
<td>BSc Physics with Space Science and Technology</td>
<td>F365</td>
<td>3 years full-time</td>
</tr>
<tr>
<td>MPhys Physics with Space Science and Technology</td>
<td>F366</td>
<td>4 years full-time</td>
</tr>
</tbody>
</table>

## Entry Requirements

### A-levels

We ask for three A-levels, including Physics and Mathematics, at grades AAB.

### Further Maths and Extended Project Qualifications

Further Maths and EPQ’s are not a formal requirement for entry onto our course. However, students with a Further Maths A-level or a relevant EPQ often find the transition to University study easier. If you have the opportunity we would certainly encourage you to take Further Maths or an EPQ.

## International Baccalaureate

34 points, typically including both HL Physics and Maths.

## Other qualifications

We welcome applications from students with other qualifications (e.g. European baccalaureate, Foundation year, Scottish Highers etc.) or relevant professional experience. Please email physics@le.ac.uk with any questions.

## Your application

We treat each application individually – we will look at your predicted grades and existing qualifications, your reference, and your personal statement.
**Personal statement**

We are looking for students who are well motivated and passionate about their subject. The personal statement is your chance to show that you fit the bill! Try to give a sense of your personality. Demonstrate your enthusiasm for Physics and Astronomy and tell us about your interests and achievements outside of the curriculum.

**Offers and visit days**

When we make you an offer (typically within a few weeks of receiving your application) we will invite you to visit the Department on one of our UCAS days. During the visit you will have a chance to see our facilities and chat to current students and staff. You will also have the opportunity to view the campus and student accommodation.

**Supporting you**

We pride ourselves on our comprehensive student support, and this starts as soon as you make a commitment to come here. If you decide to make us your first choice institution you will be assigned a contact amongst the academic staff in the department and given access to some of our tailored on-line teaching resources.

**Admission onto the course**

**If Leicester is your first choice**

If you achieve your offer grades you will definitely have a place on the course.

If you narrowly miss your offer we will try to find you a place on the course and, every year, we are able to admit a few students in this position – typically those with the strongest grades in Physics and Mathematics, or those with additional relevant qualifications, for example, Further Maths or an EPQ.

**If Leicester is your insurance choice**

If you achieve your offer grades at Leicester, but fail to make the grades at your first choice institution you are guaranteed a place on the course.

**Fees, scholarships and bursaries**

For up to date information, please take a look at: [www.le.ac.uk/study/fees](http://www.le.ac.uk/study/fees)
Contact Details

The Admissions Team
Department of Physics and Astronomy
University of Leicester
University Road
Leicester LE1 7RH
UK

t: +44 (0) 116 252 3575
e: physics@le.ac.uk
w: www.le.ac.uk/physics

All information in this brochure was correct at the time of going to print. However, changes and developments are part of the life of the University, and alterations may occur to the programmes and services described in this brochure.